ABSTRACT OF THE DISCLOSURE

A method and apparatus for switching DWDM optical signals through N switch ports. The optical switch includes N bidirectional signal processors including at least one associated with each of said N switch ports. The signal processors split and combine optical signals so that an optical signal passing in one direction through any one of the bidirectional signal processors is split into K parallel optical signals. One or more optical signals passing through any one of the bidirectional signals in the other direction are emitting as a single optical signal. The splitting direction is oriented into the switch. At least K signal delivery matrices are provided each signal delivery matrix having N matrix ports and broadcasting one of said K optical signals from any one of said N matrix ports to all other of said matrix ports. A plurality of bidirectional signal selectors are also provided at least one located between each of the bidirectional signal processors and a respective of matrix port to manage the optical signals being broadcast through the switch between the N switch ports. The signal selectors select or deselect one or more signal components from each of the K optical signals. A method of switching is also comprehended.